ABSTRACT

A method and composition for distinguishing native hydrocarbons in a formation from oil-based drilling fluid with nuclear magnetic resonance (NMR) is provided so that NMR may be used in analyzing formation fluids from boreholes drilled with oil-based drilling fluids. In the method, the drilling fluid is doped with oil solubilized paramagnetic species before or during drilling of the borehole. The paramagnetic species cause a shift in the T1 and T2 NMR response of the drilling fluid.